Amendments to Specification

Please replace the paragraph beginning on page 4, line 24, of the substitute specification (clean version) as follows:

The device in accordance with the invention comprises a computer tomograph with a rotating part 1 and a stationary part 2. The stationary part comprises a bearing assembly for rotatably supporting the rotating part. Furthermore, at least one DC-to-AC converter (inverter) is provided for generating an alternating current. This alternating current contains at least the ground wave of a first frequency. Furthermore, a conductor arrangement is present which is supplied with an alternating current from one or a plurality of DC-to-AC converters. This conductor arrangement is disposed at least along a portion of a circular track on the stationary part. Substantial components of a conductor arrangement in accordance with the invention consist of electrical conductors carried on a mount or on support rods. A conductor arrangement of this kind can be built substantially more easily than the rotating transformers known from prior art which already require, instead of the simple conductor arrangement, a completely designed primary side of a transformer. This comprises, in addition to windings and insulation, also iron or ferrite cores that must be fabricated with small mechanical tolerances to form as small as possible an air gap between the primary side (stationary) and the secondary side (rotating). For coupling out an electric current from the conductor arrangement, an inductive coupler is mounted on the rotating part. This inductive coupler is of a length that is short in comparison with the length of the conductor arrangement, and it is moved by the movement of the rotating part relative to the stationary part along the conductor arrangement. The current coupled out by the ~~conductive~~ inductive coupler can now be supplied to consumers such as the X-ray tube~~[[]]~~, and also a detector arrangement on the rotating part.

Please replace the paragraph beginning on page 9, line 22, of the substitute specification (clean version) as follows:

Fig. 1 shows a perspective view of an example of a device in accordance with the invention. Fig. 2 shows in a schematic form a sectional view of the device shown in Fig. 1. In this, the

components depicted in Fig. 1 are denoted by the same reference symbols. The device shown in Figs. 1 and 2 is a [[~~A~~]]computer tomograph (CT scanner) ~~consists~~ consisting essentially of two main mechanical components. A stationary part 2 serves as a base and frame of the entire instrument in which a rotating part revolves. A patient is positioned on a berth within an opening of the rotating part. A bearing assembly 3 retained by a hollow section 15 of the stationary part 2 serves to support the rotating part 1. In the example of embodiment, this bearing assembly is designed to be a ball bearing. Of course, various other types of bearing may be used for this. An X-ray tube 4 and an oppositely disposed detector 5 are provided for scanning the patient by means of X-rays. The X-ray tube 4 and the detector 5 are disposed to be rotatable on the rotating part 1. A motor 20 is provided to drive the rotating part. A slip ring 16 mounted on the rotating part 1 serves, together with a slip-ring tap 21 attached to the stationary part, for a transmission of auxiliary and control signals. Thus, for example, safety signals such as those enabling X-radiation may still be transmitted via mechanical sliding contacts, as is at present still required by safety standards. As an alternative to this, an activation signal for the X-ray tube could also be transmitted without contact. In order to satisfy safety standards, this signal would have to be repeated at regular time intervals. If the signal is no longer received by the rotating part at these time intervals, then the X-ray tube is deactivated. The two sliding contacts that are still necessary in a mechanical configuration are almost free from requiring maintenance because of the low current load, and cause substantially less abrasion, and thus less contamination, than the contacts previously employed for transmission of energy. With this arrangement, image data of the detector arrangement 5 can be transmitted in parallel with this to the stationary part 2, for example without contact. For energy transmission, i.e. in particular for transmitting the high energy that is required by the X-ray tube, a conductor arrangement 7 powered by a DC-to-AC converter (inverter) 6 is provided on the stationary part 2. A tapping of signals from this conductor arrangement 7 is effected by means of a coupler 8 on the rotating part 1. At least one coupler 8 should be provided to safeguard the operation. Of course, a plurality of couplers 8 may be provided. Optionally these may be connected in parallel, but also adapted for individually tapping-off supply energy for the X-ray tube 4, the detector arrangement 5, or other electronic components.

Please replace the paragraph beginning on page 10, line 20, of the substitute specification (clean version) as follows:

~~Fig. 2 shows in a schematic form a sectional view of a device in accordance with the invention as shown in Fig. 1. In this, the components depicted in Fig. 1 are denoted by the same reference symbols.~~

Please replace the paragraph beginning on page 10, line 24, of the substitute specification (clean version) as follows:

Fig. 3 shows a cutout portion of an upper region of Fig. 2 of a device in accordance with the invention. Most of the previously described components can be recognized more clearly in this illustration. Furthermore, an operative relationship between the parts becomes more clearly evident. In the illustrated region the stationary part 2 is designed to be a hollow section in order to increase the stability. The rotating part 1 is rotatably supported on this by means of a bearing assembly 3. The roller-bearing assembly 3 comprises an outer fixed (stationary) bearing ring 3a that is secured by means of a plurality of screws 14 to the stationary part 1. Confronting this, an inner bearing ring 3c is rotatably supported by means of balls 3b. Fastened to one side of this by means of a plurality of fastening bolts 13 (shown in section on the right-hand side) is a cylinder 11, and to the other side a disk 12. The disk 12 carries most of the components mounted to the rotating part 1, such as the X-ray tube 4 and the detector arrangement 5, in particular. The cylinder 11 carries a slip ring 16 secured to the cylinder 11 by means of screws 17. Mounted to this slipring, here by way of example, is a coupler 8 on a supporting member 18 that is fastened to the slipring 16 by means of screws 19. Here, for example, this coupler 8 has a U-shaped core of a magnetically soft material, such as, for example, iron or ferrite material. For transmission of energy, the coupler 8 is engaged with the conductor arrangement 7. The conductor arrangement 7 depicted here has two parallel conductors 9a and 9b, for example. These conductors are mounted to the stationary part 2 by means of support rods 23a and 23b. ~~Furthermore~~ As set forth below, a support plate ~~22~~ 41 consisting preferably of a magnetically soft material 44 is provided for exact positioning and easy assembly of the conductor arrangement 7 (see, e.g., Figs. 5-8).

Please replace the paragraph beginning on page 11, line 14, of the substitute specification (clean version) as follows:

Fig. 4 depicts a block diagram of an electrical circuit of an example of a device in accordance with the invention. Current supply to the entire arrangement is effected preferably via a three-phase line supply having a conventional line frequency which in the present case is 50 Hz, for example. Of course, a two-phase or d.c. supply is also possible. Input circuitry 30 comprises usual filters and a rectifier circuit, preferably with power factor correction (PFC). Rectified current at an output 31 is converted to a high-frequency alternating current by means of a DC-to-AC converter (inverter) 32 having typically 2, 4, or more semiconductor power switches. These semiconductor power switches may be configured, for example, as known half-bridge or full-bridge circuits. Preferably suitable as semiconductor switches are IGBTs or MOSFETS. The preferred frequency range is higher than that of the human threshold of audibility, i.e. 20 kHz, and extends as far as an upper frequency of about 1 MHz up to which modern high-power semiconductor-switches can be used economically. The high-frequency alternating current is issued from an output 33 and fed into the conductor arrangement 7 by means of a series inductance 34 and a series ~~capacity~~ capacitance 35.

Please replace the paragraph beginning on page 11, line 29, of the substitute specification (clean version) as follows:

The resonance frequency of the arrangement results from the inductance 34 and also the inductance of the conductor arrangement 7 together with the ~~capacity~~ capacitance 35. If the inductance of the conductor arrangement is sufficiently high, then the inductance 34 may be dispensed with. The inductance of the conductor arrangement 7 is composed of an inductance of the conductor itself, a transformed inductance 36 of the coupler 8, and also a coupling factor between the conductor arrangement 7 and the coupler 8. The output current tapped off from the coupler 8 can now be passed to a high voltage generator 38 producing a high voltage 39 for energizing the X-ray tube 4. A number of other consumers 40 also may be supplied in parallel with the high voltage generator 38. A connection to the coupler 8 may be effected optionally directly or by interposing a series ~~capacity~~ capacitance 37. This results in a second resonance

circuit 36, 37 on the secondary side. Operation of the inverter is effected expediently on or close to the resonance frequency of the system. Control of transmitted power may be performed, for example, by controlling the operating frequency of the inverter, so that at low power requirement, a frequency remote from the resonance frequency is chosen. Similarly, however, control of power may be effected by input circuitry 30 that sets its DC voltage according to the power requirement. In this case, the inverter connected to follow may be operated at maximum efficiency on the resonance frequency of the circuit.

Please delete the List of Reference Numerals beginning on page 14, line 8, of the substitute specification (clean version) as follows:

~~**List of Reference Numerals**~~

~~1 rotating part~~
~~2 stationary part~~
~~3 bearing assembly~~
~~4 X-ray tube~~
~~5 detector arrangement~~
~~6 d.c.-a.c. converter~~
~~7 conductor arrangement~~
~~8 coupler~~
~~9 electric conductor~~
~~10 conductor segments~~
~~11 cylinder~~
~~12 disk~~
~~13 fastening bolts~~
~~14 screw for securing bearing~~
~~15 hollow section~~
~~16 slip ring~~
~~17 screw for securing slip ring~~
~~18 supporting member for coupler~~

19 screw for securing supporting member

20 motor

21 slip ring tap

23 support rods

30 input circuitry

31 output for direct current

32 inverter

33 output for HF-alternating current

34 series inductance, stationary part

35 series capacity, stationary part

36 inductance of coupler 8

37 series capacity, rotating part

38 high voltage generator

39 output for high voltage

40 auxiliary supply means

41 bearer means for conductor arrangement

42 core of magnetically soft material

43 winding of the coupler

44 magnetically soft material